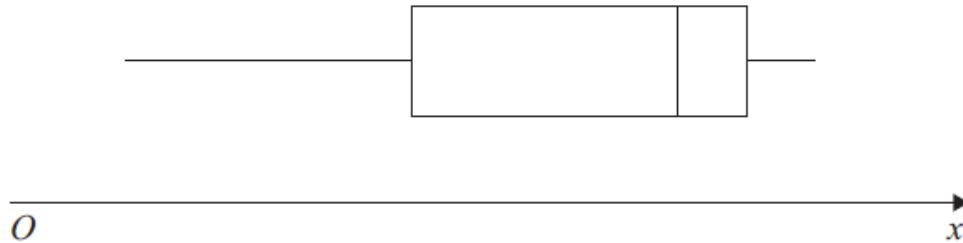## Data presentation and interpretation – AS Mathematics P2

1. June/2022/Paper_7356/02/No.11

Which of the terms below best describes the distribution represented by the boxplot shown in **Figure 1**?

**Figure 1**



Circle your answer.

[1 mark]

even          negatively skewed          positively skewed          symmetric

**2.** June/2022/Paper_7356/02/No.13

Two random samples of 12 NOX emissions (in g/km) were taken from the Large Data Set.

One sample was taken from the 2002 data and the other sample from the 2016 data.

The sample data are shown below:

| 2002 | 0.031 | 0.019 | 0.091 | 0.025 | 0.030 | 0.061 |
|------|-------|-------|-------|-------|-------|-------|
|      | 0.047 | 0.029 | 0.059 | 0.363 | 0.330 | 0.376 |

| 2016 | 0.005 | 0.047 | 0.053 | 0.063 | 0.026 | 0.013 |
|------|-------|-------|-------|-------|-------|-------|
|      | 0.058 | 0.012 | 0.010 | 0.010 | 0.008 | 0.008 |

The mean and standard deviation of the **2002** sample data are 0.122 and 0.137 respectively.

**(a)** Find the mean and standard deviation of the **2016** sample data giving your answers correct to three decimal places.

**[2 marks]**

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**2.** June/2022/Paper_7356/02/No.13

**(b)**    Siti claims these samples show that, on average, the NOX emissions across all makes of car in all areas of the UK have fallen by over 75% between 2002 and 2016.

**(b) (i)**    Show how Siti's claim of 'over 75%' has been obtained.

**[2 marks]**

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**(b) (ii)** Using your knowledge of the Large Data Set, make two comments on the validity of Siti's claim.

**[2 marks]**

Comment 1

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Comment 2

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